

Assessment: A1

Unit 1 Exam Preparation

Digital Devices Part 1



Unit 1 Exam Preparation

Week 1: A Digital devices in IT systems

LO: Understand the **different types of digital devices**, their functions and use.

Challenge:

Know and **compare the devices** to meet the needs of individuals and organisations.

Unit 1 Exam Preparation

Digital Devices Part 1

Most devices form part or all of an IT system.

...a piece of physical equipment that uses digital data, such as by sending, receiving, storing or processing it.

**How many can you name
or identify?**

Unit 1 Exam Preparation

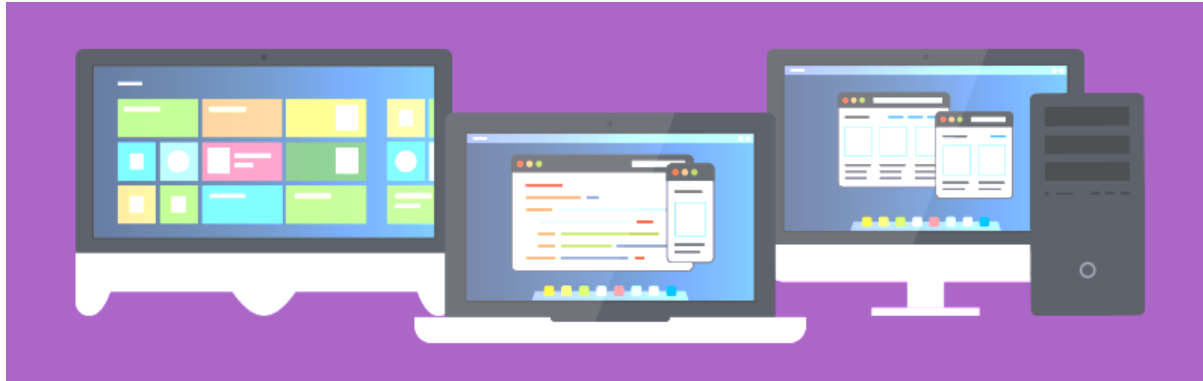
Digital Devices Part 1

- mobile devices eg: phones, scanners etc,
Servers eg: web / email / internet
- Personal Computers eg: laptops. PC's
- Entertainment Systems – CD / DVD Players
- Navigation systems eg: Sat Nav

We **rely on them** in our **personal and work lives** for all sorts of reasons. eg: getting directions, doing our shopping, entertaining ourselves, managing our business stock and finances, or a great many other reasons.

Unit 1 Exam Preparation

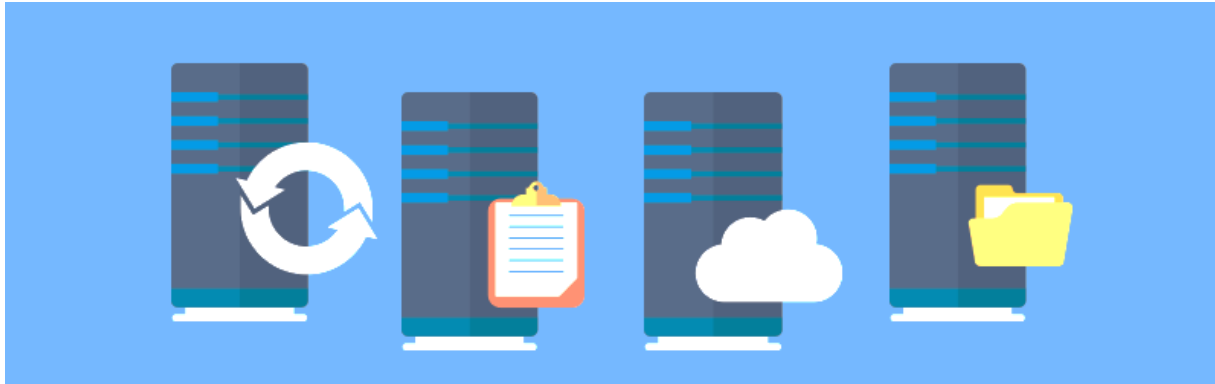
Personal Computers - functions



- Used By individuals – usually cheap and small
- Perform computing tasks – (known as general purpose)
- More software apps installed - better use / new functions performed
- Contain hardware – most can be upgraded eg: graphics card

Unit 1 Exam Preparation

Servers - functions



- They are Computers systems to access different services / resources over a network connection.
- Personal computers connect to the server via WiFi or wired methods eg: broadband using cables to form a network.
- Usually have larger storage capacity / high processing power *eg: web , file or print servers.*

Unit 1 Exam Preparation

Mobile Devices - functions



- Designed to be portable and run for long periods *and connect to the internet*. Key feature – compact
- Has a system on a chip – all components (parts) integrated on a single chip eg; CPU /Ram/GPU
- Can be difficult to upgrade parts

Unit 1 Exam Preparation

Entertainment Systems - functions



- Computer devices to entertain users eg: TV , music or game playing
- Good hard disk storage , Built – in internet connection eg: streaming, online services, WiFi, downloading

Eg: of devices , media players, MP3 players, game consoles.

Unit 1 Exam Preparation

Navigation systems- functions



- Digital devices using GPS system
- Provide real time data eg: location , routes
- Adding / Upgrade features eg: traffic /accidents
Accurate destination times. / 3d Maps
- eg: Sat Navs / GPS systems

Unit 1 Exam Preparation

Task: – digital computer devices

Using your research notes, describe the uses of the following systems.

- *Personal computers*
- *Navigation systems*
- *Mobile devices*
- *Entertainment Systems*



Challenge: How does a System-on-a-Chip reduce the battery consumption and size of your mobile device?

Unit 1 Exam Preparation

Quiz – Digital Devices

Reggie is looking for a computer that he can use for graphics design tasks. What type of digital device should he use?

a) Entertainment System
b) Personal Computer
c) Server
d) Mobile Device

Unit 1 Exam Preparation

Quiz – Digital Devices

Simone is an IT technician who regularly has to travel to different buildings to fix computers. She needs to log repairs she completes while she is out of the office.

What type of digital device should she use?

a) Server
b) Personal Computer
c) Entertainment System
d) Mobile Device

Unit 1 Exam Preparation

Quiz – Digital Devices

A server always has more storage, processing power & memory than a personal computer.

a) True

b) False

Unit 1 Exam Preparation

Quiz – Digital Devices

James uses a tablet computer so that he can access his emails while he is commuting on the train. What features of a tablet make it suitable for this?

a) Long Battery Life
b) Large Hard disk storage
c) Fast Processing Power
d) Small and Lightweight

Unit 1 Exam Preparation

Quiz – Digital Devices

What feature of mobile devices is a key reason for why they can be kept so small & compact?

??????

Unit 1 Exam Preparation

Plenary – digital computer devices 1

- *A digital device is a piece of physical equipment that uses digital data.*
- Personal computers are general purpose computing devices like desktops and laptops. They're relatively small and inexpensive and are commonly used in the workplace for tasks like word processing, desktop publishing, etc. They're used at home for web, email and gaming.
- Servers are used to manage access to web pages, email, files & printers. They're similar to personal computers but usually contain more storage, faster processing, greater memory & an active network connection.

Unit 1 Exam Preparation

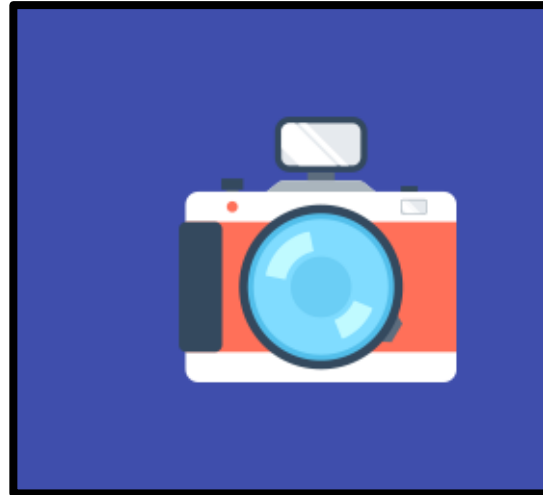
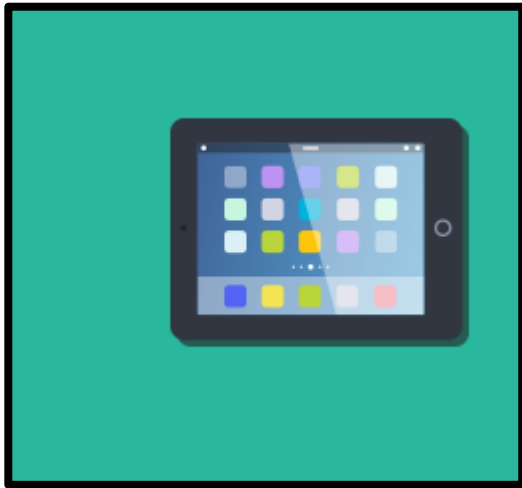
Plenary – digital computer devices 1

- Mobile devices are digital devices that are designed to be portable by being compact, light-weight and running on battery power. They're most commonly used for internet access.
- Entertainment systems are devices that are used purely for the purpose of entertainment, such as watching tv, listening to music & playing games. They usually have good storage & internet connectivity as well as a number of features specific to each device.
- Navigation systems are devices that use GPS to locate you on a map and plan routes to a chosen destination. It is commonly used as an in-car satnav to plan your route while driving.

Assessment: A1

Unit 1 Exam Preparation

Digital Devices Part 2



Unit 1 Exam Preparation

Digital Devices Part 2

Most devices form part or all of an IT system.

*...a piece of **physical equipment** that uses digital data, but some have multiple capabilities built in eg: gaming and report writing.*

There are also special devices

Unit 1 Exam Preparation

Digital Devices Part 2

- Cameras
- Multifunctional devices
- Data capture and collection systems
- Communication devices

Specialist devices perform single or small number of tasks

Unit 1 Exam Preparation

Digital Cameras- functions



Device that is capable of taking photo and video and recording data using sensors (photo sensors)

- The sensor convert light from the sensor into digital pixels which computer stores on a card.
- More pixels – better quality (common 20megapixels)
- Cameras have built in card slot, Wifi , touch screen and or video function.

Unit 1 Exam Preparation

Multifunctional Devices - functions



Usually known as MFD – capable of more than one function eg: All in one Printer

- They are usually peripheral devices that can perform both input and output. eg: scanner / printer
- *Other examples : touchscreen devices, game controllers*

Unit 1 Exam Preparation

Data Capture and collection systems - functions



- Data is input and store data through methods other than direct data entry eg: related activity. Used in shops EPOS systems.
- reduces the amount of human error issues from manual entries.

eg: scanners, Optical Mark readers

Unit 1 Exam Preparation

Communication Devices and Systems



- System allows data between two other devices
- Nowadays it is essential to communicate with each other through internet
- devices allow us to transmit data between devices via network connection methods.

Unit 1 Exam Preparation

Quiz 2– Digital Devices

What type of multifunctional device is commonly used with games consoles?

a) Digital Camera

b) Touch Screen

c) Printer / Scanner

d) Force feedback controller

Unit 1 Exam Preparation

Quiz 2– Digital Devices

Simon uses a tablet to browse web pages while on the go. What multifunctional device does he use?

a) Sat Nav

b) Touch Screen

c) Force feedback controller

d) Digital Camera

Unit 1 Exam Preparation

Quiz 2– Digital Devices

Simon also works as a photographer. What is a good reason to use digital still cameras in his job?

- | |
|--|
| a) He can edit the photos in photo editing software. |
| b) He can also record videos if he wants. |
| c) It's better quality than old fashioned cameras. |
| d) It's quicker to take the pictures |

Unit 1 Exam Preparation

Quiz 2– Digital Devices

Photos taken using digital cameras cannot be printed as traditional photos.

a) True

b) False

Unit 1 Exam Preparation

Quiz – Digital Devices

What is a device that can both print and scan known as?

??????

Unit 1 Exam Preparation

Plenary – digital computer devices 2

Multifunctional devices are capable of more than one function, such as input and output.

They're used for many different reasons, such as touch screens that allow you to input data without a separate keyboard, and force feedback game controllers that let you control the game, while receiving vibration as output.

Unit 1 Exam Preparation

Plenary – digital computer devices 2

Digital cameras are used to take photo and video and store it as digital data. This can then be used to share the photos and videos online or to edit them using photo or video editing software.

Data capture and collection systems input and store data through methods other than direct data entry. They're commonly use in shops at the EPOS till, such as barcode scanners for inputting products.

Unit 1 Exam Preparation

Plenary – digital computer devices 2

Communication devices and systems move data between two other devices, such as two computers.

We use them for networking, including to send and receive data over the internet.